

# **Trigger Inhibits**

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# Overview

- **Trigger inhibits implemented using commercial modules**
  - **NIM and Camac logic in 1RR12D**
- **16 primary inputs.**
  - **can be masked individually from RunControl**
  - **Controlled from muon scintillator camac**
    - **Must include b0musc00 in a run to use inhibits**
  - **OR of the inputs sent to the Global Level 2 board in the Trigger Supervisor crate**
  - **Status on LED panel above Ace console**

# Overview, 2

- **Two classes of inputs:**
  - Signals from the FIX MCS control system
    - Includes trips, but takes seconds(?) to reach inhibit
    - Can be masked separately from iFix
  - Fast trip signals from power supplies
    - msec time scale
    - minimize chance of corrupt data
      - Most common source of inhibit
- **Logic:**
  - $TI_i = (iFix_i + Trip_i) * Mask_i$
- **Some inputs direct from iFix, others require some NIM logic**

# iFix Inputs

- **Specify status of particular components.**
  - limited number of inhibit channels
  - divide separate functions within a system to separate MCS output channel
  - combine elements for one piece of experiment from various monitors
    - **Example: CCAL includes**
      - PMT HV
      - CES HV
      - CES LV
- **Key idea:**
  - **Everything should be green on the inhibits iFix page**

# **Inhibit channel assignments**

- **0 Solenoid**
- **1 SVX**
- **2 ISL**
- **3 COT**
- **4 TOF**
- **5 Central Calorimeter**
- **6 Plug Calorimeter**
- **7 Central Muon (CMU, CMX, CMP)**
- **8 IMU**
- **9 CLC**
- **10 L00**
- **11 TeV Events**
- **12 [unassigned]**
- **13 Rack Protection**
- **14 VME Power Supplies**
- **15 [unassigned]**

# Summary of iFix Signals

Channel	Tag	Computer
1	SVX_HV	svxiicon
2	ISL_HV	svxiicon
3	COT_HV	cot2
4	COT_LV	cot2
5	TOF_HV	tof1
6	TOF_LV	tof1
7	CENTRAL_HV	pisabox
8	CES_HV	muon3
9	CES_LV	voltman
10	XENON_OFF	pisabox
11	PLUG_HV	cdfephv
12	PES_LV	voltman
13	MUON_HV	muon3
14	MUON_LV	voltman
15	CSP_CSX	cdfccu
16	IMU_HV	muon3
17	IMU_LV	voltman
18	CLC_HV	clc
19	RACKS	cdf_s3
20	VME_POWER	voltman
21	CSP_CCU	cdfccu
22	IMU_CCU	cdfccu
23	L00_HV	svxiicon